HSTL Hazardous Substances Technical Liasions

OFFICE OF RESEARCH AND DEVELOPMENT HAZARDOUS SUBSTANCES TECHNICAL LIAISON REGION 9 NEWSLETTER

Fall 2006, Edition 37

Hello and welcome to the Fall 2006 edition of the Region 9 HSTL Newsletter! Of course, it's also playoff time in the world of baseball.....we Bay Area folks didn't have such a good weekend with the Oakland A's, but life goes on. Good luck to the Tigers and <whoever>..... in the World Series. Who will it be this year?!?

This quarter, the HSTL newsletter covers the usual wealth of conference dates and new documents, but also information on another interesting nanotechnology workshop, the Triad philosophy of dealing with a contaminated site, as well as a number of recently completed ETV technology verifications.

In the Region 9 EPA office, we have a number of new staff in Superfund. Welcome! As a new RPM, you are probably discovering the challenges of dealing with a myriad of disciplines. No one can be a master of all of the challenges that come our way. So, how can you deal with these sites?? The RPMs have a number of options to satisy their tech support needs, including the esteemed Tech Support Section right here in the Superfund Division. At the risk of being repetitive, let me point out another option for you, and that is ORD tech support through the ORD laboratories. There are established Technical Support Centers (TSCs) that can offer various types of support free to Superfund and RCRA staff. Yeah, free! That means support with no PRs or budgets. The TSCs can offer expert advice on any number of hazardous waste topics, from site characterization to the engineering of remediation systems to aerial photography. If you have any needs related to this type of support, please feel free to contact me, your ORD technical liaison. That's part of my job! More on my position can be found here -> http://www.epa.gov/osp/hstl.htm .

Enjoy the newsletter and let's hope your team wins in the World Series!

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ORD Hazardous Substances Technical Liaison
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Fall 2006 Edition of the Region 9 HSTL Newsletter:

National News

- New Tools and Technologies
  - New Decision Tool Uses Vegetative Data to Plan Remediation Strategies
  - ETV Verifications
  - Standout NRMRL Researchers Receive National Recognition
  - Triad News - Brownfields Use of the DST Screening Matrix / Superfund Triad Workgroup
- Nanotech for Site Remediation Workshop Summary (Chicago, September 6-7, 2006)
- OSWER IWG Grant Opportunity
- SERDP and ESTCP Efforts Identify and Distinguish Military, Non-Military, and Natural Sources of Perchlorate

Local News

- Pilot Tests Lead to Expanded ISCO for Vadose-Zone Remediation
- International Conference on The Future of Agriculture: Science, Stewardship and Sustainability (Sacramento, August 7-9, 2006)

Datebook - Upcoming Events

Web Pages

- Vendor Spreadsheets
- EUGRIS Corner
- Fractured Bedrock Focus Area Updated

Recent Documents, Databases, etc.

Serious Scientists Gather 'Round...

N A T I O N A L N E W S

New Tools and Technologies

New Decision Tool Uses Vegetative Data to Plan Remediation Strategies
(From Technology News and Trends, October 2006)

Private industry and academia collaborated with the US EPA in developing a decision tool that uses data on existing vegetation to identify appropriate cleanup methods for distinct portions of large waste sites. Implementation of this new tool, known as the Riparian Evaluation System (RipES), began in August at Montana's Clark Fork River OU, a 120-mile-long stretch along the river with extensive fluvial deposition of acid metalliferous mining wastes. As part of the comprehensive Milltown Reservoir / Clark Fork River Superfund Site, the OU record of decision (ROD) specifies cleanup remedies such as removal of some wastes from 170 acres, in-place treatment of 700-1,700 acres of wastes using lime and organic matter as amendments, and stream-bank stabilization using a soft engineering approach. This approach involves use of vegetation with deep and binding root systems such as willow and water birch to minimize streambank erosion.

For complete article, see: http://www.cluin.org/download/newsltrs/tnandt1006.pdf

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ETV Verifications

ETV has completed verification testing and reports for 357 innovative environmental technologies! Here are links to the latest verifications. For a full list of ETV verifications, visit: http://www.epa.gov/etv/verifications/verification-index.html.

DIOXIN EMISSION MONITORING SYSTEMS VERIFIED
http://www.epa.gov/etv/verifications/vcenter1-37.html

BAGHOUSE FILTRATION PRODUCT VERIFIED
http://www.epa.gov/etv/verifications/vcenter5-2.html.

RAPID TOXICITY TESTING SYSTEMS VERIFIED
http://www.epa.gov/etv/verifications/vcenter1-27.html

REVERSE OSMOSIS BASED POINT-OF-USE DEVICE FOR MICROBIOLOGICAL AGENTS VERIFIED
http://www.epa.gov/etv/verifications/vcenter2-16.html

ARSENIC TEST KIT VERIFIED
http://www.epa.gov/etv/verifications/vcenter1-21.html

REVERSE OSMOSIS BASED POINT-OF-USE DEVICE FOR CHEMICAL AGENTS VERIFIED
http://www.epa.gov/etv/verifications/vcenter2-18.html

ULTRAFILTRATION MEMBRANE FOR MICROBIOLOGICAL REMOVAL VERIFIED
http://www.epa.gov/etv/verifications/vcenter2-10.html

COAGULATION AND FILTRATION TECHNOLOGY FOR ARSENIC REMOVAL VERIFIED
http://www.epa.gov/etv/verifications/vcenter2-12.html

ENERGY EFFICIENT TECHNOLOGY VERIFIED
http://www.epa.gov/etv/verifications/vcenter6-12.htm

Standout NRMRL Researchers Receive National Recognition
(Thanks to NRMRL newsletter)

Two NRMRL researcher inventions were recently selected for exhibition at the World's Best Technologies Showcase in Arlington, Texas. This annual program highlights stellar technologies developed by government laboratories, universities, and research institutions, with the goal of helping speed them to the marketplace. The NRMRL technologies selected are:

- Biomass Concentrator Reactor. This technology uses a polyethylene bead aggregate membrane through which treated wastewater permeates by gravity, leaving the biomass solids behind in the reaction tank. This results in a very long sludge-age biomass able to produce ultra high-purity effluent cost-effectively. The process is particularly well-suited for cleanup of soluble groundwater contaminants such as MTBE, a gasoline additive, and fuel hydrocarbons.

- Recovery of Volatile Organic Compounds (VOCs) from Emulsion of VOCs in Water by Pervaporation. This invention recovers and recycles VOCs from surfactants (wetting agents)

from liquid emulsions in groundwater and industrial waste streams by means of pervaporation through membranes. This technology is an economic alternative to pump-and-treat and other cleanup systems that create hazardous wastes and air pollutants.

The two technologies, which are available for licensing and commercial applications, are standouts among many other EPA patented technologies with the potential for commercial development. The promotion of market-ready federal research products grew out of a demand for cost-effective and sustainable technologies in the world marketplace. In the late 1980s, Congress authorized the Bayh-Dole Act and the Federal Technology Transfer Act. This legislation, achieved after much public debate on the ownership of intellectual property and the commercial development of tax-supported institutional research, has resulted in many significant and useful products and processes.

Exhibited at the 2006 World's Best Technologies Showcase, the two EPA technologies were selected by a committee of representatives from organizations such as the National Science Foundation, Procter & Gamble, Battelle Labs, Intel, Ford, 3M and others. The technologies were judged on three basic questions:

- Is it a Platform Technology that could generate many products?
- Is it a First in the Space, with the potential to give rise to a whole new industry?
- Is it Close to Market, having few barriers remaining to commercial application?

The first NRMRL technology selected--the Biomass Concentrator Reactor--met all these criteria. It was designed for use in the retention of high-biomass solids by the polyethylene membrane to mineralize MTBE and other soluble pollutants to sub-microgram/L levels in groundwater. The reactor is also useful for municipal wastewater, drinking water, and industrial wastewater treatment. Biological treatment of wastewater is a $15 billion industry. Most conventional wastewater treatment systems using micro-organisms to degrade contaminants rely on settling tanks and filters that allow some biological solids to overflow or break through into the product water. More-conventional membrane bioreactors require energy-consuming pumps to drive fluid through their ultra-filtration membranes. The Biomass Concentrator Reactor, invented by NRMRL's Albert D.Venosa, Ph.D. and the University of Cincinnati's Makram T. Suidan, Ph.D., is gravity fed, providing significant savings in energy costs. It is especially useful in a secondary or polishing role for which there is a large market. The invention holds particular promise for improving municipal water and wastewater treatment facilities, but is applicable to any industry using biological treatment for removal of contaminants.

The second technology selected was the Recovery of Volatile Organic Compounds (VOCs) from Emulsion of VOCs in Water by Pervaporation. Invented by NRMRL's Subhas K. Sikdar, Ph.D. and Leland M. Vane, Ph.D., this technology met the 2006 Showcase criteria because it offers a clean and sustainable alternative to conventional approaches such as pump-and-treat, air or stream stripping, or bioremediation for removal of VOCs from groundwater and industrial waste streams. (VOCs, such as benzene or perchloroethylene, include many toxic chemicals known to be carcinogenic.) Current methods of removing VOCs create hazardous wastes and air pollution. Pervaporation through membranes removes VOCs from surfactants and concentrates them for

economic disposal or reuse while requiring much less energy than conventional systems. It is compact, easily portable, and readily available to a large potential market.

EPA has other patentable technologies of interest for further development. They can be viewed at http://www.epatechmatch.com. For more information on pervaporation research, see http://www.epa.gov/ord/NRMRL/std/cppb/pervapor/index.html

Contact Patricia Schultz, Public Information Office, 513-569-7966, or schultz.patricia@epa.gov.

Triad News - Brownfields Use of the DST Screening Matrix / Superfund Triad Workgroup

The concept of "Triad" has been around for some time. As you know, it is where one approaches site cleanup using systematic planning, dynamic work strategies and innovative rapid sampling and analytical technologies. The philosophy is to save money and get cleanups done quicker. Well, there is news on two fronts for Triad.

> First, the Brownfields program is trying to encourage their grantees and others to follow the Triad process. It really does not matter whether you are working on a Superfund, RCRA or Brownfields site. Triad can still help you make site cleanup decisions quicker and cheaper. OSWER is getting ready to release a Triad "Technology Bulletin" with more info on how Triad applies to Brownfields. It will be titled "Management and Interpretation of Data Under a Triad Approach". When available, this bulletin will be able to be downloaded from the following website: http://www.brownfieldstsc.org . One of the most important tools available for Triad work is the Triad Decision Support Tool (DST) Screening Matrix. It can be found at the following site: http://www.frtr.gov/decisionsupport/DSTMatrix.htm .

> Second, the Office of Superfund Remediation and Technology Innovation (OSRTI) has seen the value of the Triad process and is pushing for more regional acceptance and use. In a letter to the Regions, OSRTI is asking that each Region nominate a staff member to be the "Superfund Regional Triad Lead". This person will coordinate ongoing and future Triad efforts in their respective Region. In addition, OSRTI is asking for the formation of a "Superfund Triad Workgroup", which will be made up of all the regional Triad Leads. They will work on nominating and initiating the use of the complete Triad process at two Superfund sites in FY07. Be looking for info on this from your Superfund management.

Nanotech for Site Remediation Workshop Summary (Chicago, Sept 6-7, 2006)

Once again, the subject of nanotechnology was the topic of an EPA workshop. This workshop was centered on the use of nanotechnology for waste site remediation. Hosted by Region 5's HSTL Chuck Maurice (that's Chuck in the picture!) and his colleague Warren Layne, it was held on September 6th and 7th and offered a day of presentations on a number of applications of nanotechnology (case studies), followed by a day of talks on the potential associated risks; that is, implications. Academic researchers, regulators and business representatives were all on the agenda. There were lively discussions, especially following the risk presentations. Some believe that the gains from using nanotechnology more than outweigh the potential health impacts, especially when you consider the business market value of nanotechnology. Others countered that argument with a more subdued outlook and believe that perhaps we should be approaching this already burgeoning industry with a "Precautionary Priniciple" philosophy; that is, we should learn more about the potential human health and environmental impacts before wholeheartedly endorsing its use in commerce. Worker safety is also important, along with end users.

Below are the titles for the technical presentations. Proceedings will be available around mid-November 2006.

- Introduction to Nanotechnology for Site Remediation - Wei-xian Zhang (Lehigh University)
- Worldwide Nanotechnology Status - Barbara Karn (EPA)
- Nanoscale Zero-Valent Iron Field-Scale and Full-Scale Studies - Martha Otto (EPA)
- Nease Chemical Superfund Site Nanotechnology Update - Mary Logan (EPA)
- Nano-ZVI vs. Conventional ZVI: What Difference Does Particle Size Make, Really? - Paul Tratnyek (Oregon Graduate Institute)
- Transport of Modified Reactive Nanoscale Iron Particles in Subsurface Soils - Krishna Reddy (University of Illinois - Chicago)
- Chemical and Biochemical Nanosensors Based on Single Walled Nanotubes Field Effect Transistor Devices - Erica Forzani (Arizona State University)
- Functionalized Nanoporous Ceramic Sorbents for Removal of Hg and other COCs - Shas Mattigod (Pacific Northwest National Lab)
- Nanotechnology Life-Cycle Analysis - Barbara Karn (EPA)

- A Proactive Approach to Nanotechnology Environmental Health and Safety - Aatish Salvi (Nanobusiness Alliance)
- Environmental Transport, Fate, and Potential Risks of Nanomaterials - Greg Lowery (Carnegie Mellon University)
- Nanotoxicology and Industry - Shane Journeay (University of Saskatchewan)
- Risk Assessment of Nano-Scale Metal Particles - Joyce Tsuji & Fionna Mowat (Exponent, Inc.)
- Pharmacokinetics, Tissue Distribution and Excretion of Polyacrylamide Nanoparticles - Yvan Wegner (University of Michigan)
- Life Cycle Assessment of Nanotechnology-Based Remedial Technologies - Olivier Jolliet (University of Michigan)
- Functional Optical Polymer Nanoparticles: Uses and Toxicology - Martin Philbert (University of Michigan)

OSWER IWG Grant Opportunity

Do you have an innovative idea with environmental benefit that needs a boost? Does your project idea create innovative and collaborative approaches for restoring the vitality of contaminated properties? Does it promote stewardship, resource conservation, and recycling, especially in areas of municipal solid waste, industrial materials, priority toxic chemicals, or electronics? Does your idea increase homeland security? Does your project encourage voluntary clean up efforts? If so, please apply for EPA's OSWER Innovations Pilots by November 20, 2006.

To learn more about EPA's RFA and how to apply, please read this:
http://www.epa.gov/oswer/docs/grants/06-08.pdf
To learn more about the OSWER Innovations Pilots, including past projects funded by EPA, go here: http://www.epa.gov/oswer/iwg/

Eligibility Requirements: Proposals will be accepted from states; territories; Federally Recognized Indian Tribes, and possessions of the U.S., including Puerto Rico, U.S. Virgin Islands, Northern Mariana Islands, and the District of Columbia; public and private universities and colleges; hospitals; laboratories; interstate organizations; intrastate organizations; local agencies; other public or private nonprofit institutions, and individuals. Nonprofit organizations described in Sect ion 501(c)(4) of the Internal Revenue Code that engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act of 1995 are not eligible to apply. For profit organizations are generally not eligible for funding.

For more info on IWG's, contact Sofia Lo, lo.sofia@epa.gov and (202) 566-0199. Please check out the RFA first to answer application questions.

SERDP and ESTCP Efforts Identify and Distinguish Military, Non-Military, and Natural Sources of Perchlorate

(From SERDP-ESTCP Information Bulletin, Summer, 2006 - Thanks to Lenny Siegel, 9/5/06, CPEO listserve)

Since perchlorate's identification as a chemical of concern in 1997, improved analytical methods have increased the frequency of detecting perchlorate in groundwater and drinking water supplies. Current estimates indicate perchlorate is present in groundwater in at least 30 states and may affect the drinking water supplies of more than 20 million people in the southwestern United States. While the source of perchlorate in water supplies has long been attributed to the Department of Defense (DoD), National Aeronautics and Space Administration (NASA), and defense contractor facilities, non-military sources of perchlorate also have been documented. Further, perchlorate-contaminated sites have been identified for which anthropogenic sources of contamination are unlikely, raising questions about the role of natural sources. With SERDP and ESTCP support, researchers are identifying and assessing anthropogenic and natural sources of perchlorate as well as developing and demonstrating innovative tools capable of distinguishing perchlorate origins.

Anthropogenic, non-military sources of perchlorate are being examined under the SERDP project Evaluation of Alternative Causes of Wide-Spread, Low Concentration Perchlorate Impacts to Groundwater (ER-1429)....

To distinguish natural from anthropogenic perchlorate in the environment, investigators from Shaw Environmental, the University of Illinois at Chicago, USGS, and Oak Ridge National Laboratory are developing and validating stable isotope methods under the ESTCP project Validation of Chlorine and Oxygen Isotope Ratio Analysis to Differentiate Perchlorate Sources and to Document Perchlorate Biodegradation (ER-0509)....

For the entire article, download the Bulletin as a 486 K PDF file from:
http://www.serdp.org/upload/06%20Summer.pdf

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L O C A L N E W S

Pilot Tests Lead to Expanded ISCO for Vadose-Zone Remediation

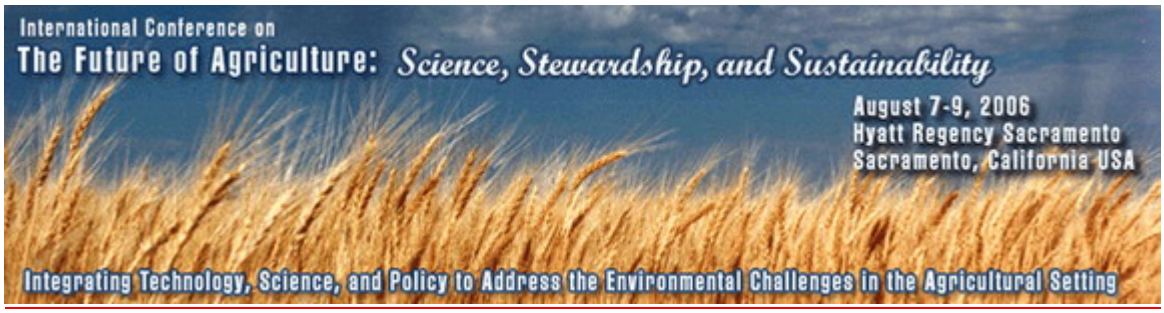
(From Technology News and Trends, July 2006)

Following successful pilot-scale field testing of in-situ chemical oxidation (ISCO) in 2001, the USAF began an expanded-scale application in 2003 to remove chlorinated solvents from an upgradient source area at Air Force Plant 44 in Tucson, AZ. [For information on site conditions and details concerning the pilot test, see the January 2003 issue of Technology News and Trends.] During both the pilot and expanded operations, potassium permanganate solutions were injected to remove residual high concentrations of TCE from fine-grained alluvial sediments in the upper part of the regional aquifer.

For the complete article, please see: http://www.cluin.org/download/newsltrs/tnandt0706.pdf

Article contributed by George Warner, USAF (george.warner@wpafb.af.mil or 937-255-3241) and Timothy J. Allen, Raytheon (tjallen@raytheon.com or 520-794-9450)

International Conference on The Future of Agriculture: Science, Stewardship and Sustainability, (Sacramento, August 7-9, 2006)



The objectives of this conference, held in the heart of California's farming country, Sacramento, were to cover a number of cross-media issues associated with agriculture, including air quality, water quality, waste management and environmental stewardship. It was co-sponsored by the Hazardous Substances Technical Liaison (HSTL) Program and organized by a number of agencies, including the Center for Hazardous Substance Research at Kansas State University and EPA Regions 7&9.

The attendees exchanged knowledge on best management practices, and learned how to integrate sustainable practices into planning, policy and regulations development and decision making.

There were multiple tracks and they are listed below. Proceedings will be able to be obtained around February, 2007 from the following website: http://www.dce.k-state.edu/dce/conf/ag&environment/proceedings.shtml .

Pest and Nutrient Management
- Integrated Pest Management
- IPM Policy Discussion
- Integrated Systems: Policy and Economics
- Agrochemical Exposure
- Fumigation
- Incentives for Adoption of IPM and Biologically-Integrated Farming Systems

Cleanup and Technology Transfer
- Remediation
- Natural Systems Remediation
- Waste to Energy
- Energy Solutions
- Animal Production: Air Quality Panel Discussion
- Dairy Water Quality
- Animal Production Policy
- Biosolids, Amendments and Biomass

Resource Management
- Water Quality: Impacts and Solutions
- Biodiversity: Ecosystems
- Conservation Farming Systems

Environmental Management
- Environmental Management Systems Panel
- Sustainability Discussion
- Water and Salinity Management
- Irrigation, Innovation and the Environment

DATEBOOK - UPCOMING EVENTS

This section of the newsletter is an attempt to present both EPA and non-EPA sponsored environmental technology related courses and conferences. But being a quarterly publication, it is impossible for this newsletter to always be up-to-date. For the most pertinent information on upcoming EPA courses, see http://www.trainex.org. These events are listed chronologically.

Many of the entries in these newsletters are from TIO's "TechDirect" emails (thank you Jeff Heimerman!). TechDirect prefers to concentrate mainly on new documents and the internet live events. However, they do support an area on the CLU-IN webpage where announcement of conferences and courses can be regularly posted. Sponsors can input information on their events at http://clu-in.org/courses . Likewise, the page has an area for upcoming events that might be of interest. It allows users to search events by location, topic, time period, etc.

Many of you know that www.clu-in.org routinely place seminars in the CLU-IN Studio archive after they have aired. This provides access to the slides and the audio file for each presentation. Some of you requested that we make these audio files more portable. Now they have done that. For more recent seminars, you now have the option to download them in MP3 format which will allow you to listen via portable music players. You may also subscribe to their podcast feed, which will alert you when new seminar archives are available. For more information, see http://clu-in.org/live/archive.cfm .

New CLU-IN Training Area. A new training section has been posted to CLU-IN. The new Training page offers visitors a quick glimpse of upcoming training opportunities in a monthly view as well as a running list of events. Links to upcoming Conference Webcasts, Trainex and Archived Internet Seminars and Podcasts are available on the new Training Page. See: http://www.cluin.org/training .

ITRC Internet Based Training

These are typically 1-2 hour online courses where the participant follows a webpage presentation, while listening on the phone. Check - http://www.itrcweb.org or http://www.clu-in.org/studio/seminar.cfm for times and registration.
NOTE: All dates/times are subject to change – check http://www.itrcweb.org for the most up-to-date information.

Oct. 31st - *Environmental Management at Operational Outdoor Small Arms Firing Ranges*
2:00 p.m. to 4:15 p.m. EASTERN Time

Nov. 7th – *Radiation Site Cleanup: CERCLA Requirements & Guidance*
2:00 p.m. to 4:15 p.m. EASTERN Time

Nov. 9th - *Characterization, Design, Construction and Monitoring of Bioreactor Landfills*
11:00 a.m. to 1:15 p.m. EASTERN Time

Nov. 14th – *Real-Time Measurement of Radionuclides in Soil*
2:00 p.m. to 4:15 p.m. EASTERN Time

Nov. 16th - *Evaluating, Optimizing, or Ending Post-Closure Care at Municipal Solid Waste Landfills*
11:00 a.m. to 1:15 p.m. EASTERN Time

NOTE: All dates/times are subject to change – check www.itrcweb.org for the most up-to-date information.

Three EPA Sediment Remedy Webcasts:
- Evaluate the technical suitability of capping (October 17)
- Dredging (October 23)
- Monitored Natural Recovery (MNR) (October 30)
http://clu-in.org/studio

The Water Environment Federation 79th Annual Technical Exhibition and Conference (WEFTEC 2006)
October 21-25, 2006
Dallas, TX
http://www.weftec.org/home.htm

Emergency Response to Hazardous Material Incidents
October 23-27, 2006
Cincinnati, OH
http://trainex.org/classdetails.cfm?courseid=21&classid=2606

Cal EPA / DTSC Green Chemistry Symposium
October 24, 2006, 9am - noon
Sacramento, California
http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistry.cfm

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ASTSWMO Annual Meeting
October 24-25, 2006
Kansas City, MO
http://astswmo.org

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EPA Land Revitalization Summit
October 30-November 1, 2006
Austin, TX
http://www.lrsummit.com

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Hazardous Materials Incident Response Operations
October 30-November 3, 2006
Cincinnati, OH or Edison, NJ
http://trainex.org/offeringslist.cfm?courseid=23

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Superfund Academy 101
October 30-November 3, 2006
San Francisco, CA
http://www.trainex.org/classdetails.cfm?courseid=254&classid=2838

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National SBIR Fall 2006 Conference
November 6-9, 2006
Milwaukee, WI
http://www.sbirworld.com/conferences/eventDetails.asp?mnuConf=1&confId=1648&fromPg=home

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American Institute of Chemical Engineers
November 12-17, 2006
San Francisco, CA
http://www.aiche.org/Conferences/AnnualMeeting/index.aspx

The Environmental Division meeting page is:
http://aiche.confex.com/aiche/2006/techprogram/D1080.HTM

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Brownfields Conference
November 13-16, 2006
Boston, MA
http://www.brownfields2006.org/en/index.aspx

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US EPA Fall Tech Support Project Meeting
(Held in conjunction with GRAC's 2nd Symposium: High Resolution Site Characterization & Monitoring)
November 13-17, 2006
Long Beach, CA
http://www.epa.gov/tio/tsp/meetings.htm

OSC / Support Personnel Radiation / Nuclear Response Course
November 14-16, 2006
Farmer Branch, TX
http://www.trainex.org/offeringslist.cfm?courseid=514

Sampling For Hazardous Materials
November 14-16, 2006
Harrisburg, PA
http://www.trainex.org/offeringslist.cfm?courseid=20

Hard Rock 2006 - Sustainable Modern Mining Applications
November 14-16, 2006
Tuscon, AZ
http://www.epa.gov/hardrockmining/hardrock/hardrock2006.htm

Partners in Environmental Technology Technical Symposium & Workshop

November 28-30, 2006

Washington, D.C.

http://www.estcp.org OR http://www.serdp.org

Byproduct Beneficial Use Summit
November 19-December 1, 2006
San Francisco, CA
http://www.byproductsummit.com/2006/index.html

Alternative Covers for Landfills, Waste Repositories, and Mine Wastes: Design, Modeling, Construction, and Monitoring
(3rd of 4 workshops)
November 28-30, 2006
Denver, CO
http://www.landfillcover.dri.edu

International Conference on Nanotechnology Occupational and Environmental Health and Safety: Research to Practice
December 4-7, 2006
Cincinnati, OH
http://www.uc.edu/noehs/

2006 Emergency Preparedness and Prevention and Hazmat Spills Conference
December 3-6, 2006
Valley Forge Convention Center, PA
http://www.2006conference.org/

Remedial Design / Remedial Action (RD/RA) Course
December 5-7, 2006
San Francisco, CA
http://www.trainex.org/offeringslist.cfm?courseid=47

Northwest Environmental Conference and Tradeshow
December 7-8, 2006
Portland, OR
http://www.nebc.org/NWEC.aspx

Annual NIEHS Superfund Basic Research Program Meeting
December 11-12, 2006
San Diego, CA
http://www-apps.niehs.nih.gov/sbrp/3/annual_2006/

EPA OSC 201
December 11-13, 2006
Philadelphia, PA
http://www.trainex.org/offeringslist.cfm?courseid=285

Waste Treatment, Transportation and Disposal
December 14-15, 2006
Philadelphia, PA
http://www.trainex.org/classdetails.cfm?courseid=46&classid=2683

4th International Conference on Remediation of Contaminated Sediments
January 22-25, 2007
Savannah, GA
http://www.environmental-expert.com/events/conferencegroup-sediments/conferencegroup-sediments.htm

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Hazardous Materials Incident Response Operations
January 22-27, 2007
Cincinnati, OH
http://trainex.org/offeringslist.cfm?courseid=23

Alternative Covers for Landfills, Waste Repositories, and Mine Wastes: Design, Modeling, Construction, and Monitoring
(final of 4 workshops)
January 23-25, 2007
Riverside, CA
http://www.landfillcover.dri.edu

Hazardous Materials Incident Response Operations
February 5-9, 2007
Edison, NJ
http://trainex.org/offeringslist.cfm?courseid=23

OSC Readiness Training
February 12-16, 2007
Miami, FL
Contact: Gary Turner (703) 603-9902

Sampling For Hazardous Material - Region 9
February 20-22, 2006
Location TBD
http://www.trainex.org/offeringslist.cfm?courseid=20

8th EPA Superfund National Radiation Meeting
February 27-March 2, 2007
San Francisco, CA
(For info, please contact Stuart Walker - walker.stuart@epa.gov)

Environmental Remediation Technologies
Febraury 27-March 1, 2007
Columbus, OH
http://www.trainex.org/offeringslist.cfm?courseid=2

AEHS 17TH Annual West Coast Conference On Soils, Sediments, And Water
March 19-22, 2007
San Diego, CA
http://www.aehs.com/conferences/westcoast/index.htm

"Nanotechnology for Contaminated Site Remediation"
At the 233rd American Chemical Society National Meeting
March 25-29, 2007
Chicago, Illinois
http://oasys.acs.org/

9th International In Situ and On-Site Bioremediation Symposium
May 6-10, 2007
Baltimore, MD
http://www.battelle.org/environment/er/conferences/biosymp/default.stm

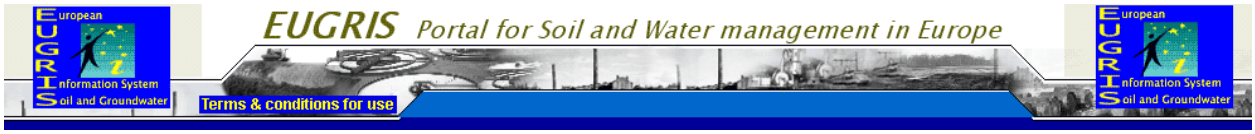
W E B P A G E S

Vendor Spreadsheets

EPA created the REACH IT System to compile and share information on treatment and characterization technologies for a range of contaminant types and media. Over time, this system was populated with information on over 500 remediation technologies and 260 characterization technologies. With the evolution of on-line search services and engines and the development of a range of other resources on technologies and vendors coupled with resource limitations, EPA discontinued the on-line REACH IT System in 2006. Upon discontinuation of the EPA REACH IT System, a fully searchable database is no longer available. However, limited technology and vendor information is preserved in the form of two vendor summary lists. See http://clu-in.org/vendor/vendorinfo/ .

EUGRIS Corner

(Thanks to TechDirect newsletter)



EUGRIS is a portal for soil and water management in Europe. It provides structured access to information, based on topic or country for example, helping you to quickly find the information you need. EUGRIS operates as a community of registered people and organizations who co-operate to supply the latest information for the benefit of everyone. New on EUGRIS:

> Found at: http://www.eugris.info/whatsnew.asp?StartYear=2006&Date=July
1. European Commission (2006) Water and Soil European Research - Catalogue of projects
2. Waste & Resources Action Programme (2006) Uses of compost in regeneration and remediation of brownfield sites in the UK
3. Atkins Global ATRISKSOIL SSV Website

> Found at: http://www.eugris.info/whatsnew.asp?StartYear=2006&Date=August
1. NICOLE Workshop Report: Data Acquisition for a Good Conceptual Site Model.
2. Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects

> Found at: http://www.eugris.info/whatsnew.asp?StartYear=2006&Date=Sept
1. International Centre for Soil and Contaminated Sites 2006, Manual for Biological Remediation Techniques
2. Department for Environment, Food and Rural Affairs - DEFRA 2006, River Basin Planning Guidance
3. Department for Environment, Food and Rural Affairs - DEFRA, Water Framework Directive Web Page
4. NITRABAR Project Introductory Factsheet. Remediation of Agricultural Diffuse Nitrate Polluted Waters through the Implementation of a Permeable Reactive Barrier

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Fractured Bedrock Focus Area Updated

Published reports and conference presentations of characterization and remediation of contaminated ground water in fractured bedrock sites are collected and summarized in the website. The site contains 90 case studies, which are evenly split between pilot studies and full scale application. Almost half of the sites have, or are suspected of having NAPL. Over a third of site managers have chosen bioremediation and one quarter have chosen pump and treat and another quarter have chosen oxidation for a remediation technology. Only one Technical Impracticability waiver has been requested and five No Further Action certificates were issued by the state regulatory agencies. Seventy-five percent of the sites are located in New York, New Jersey, Massachusetts, and Pennsylvania. For more information, see http://clu-in.org/fracrock .

RECENT DOCUMENTS, DATABASES, ETC.

These entries are arranged alphabetically. Thanks to TechDirect, Tech Trends, NRMRL News, the ETV Program, DOE, DoD and others for posting their latest documents. And remember, many of these are available in paper format in the Region 9 library. Use your local library.....or it may disappear. It's happening at EPA.....

Abstracts of Remediation Case Studies, Volume 10
(EPA 542-R-06-002)
http://www.cluin.org/download/frtr/epa542r06002.pdf

Assessing the Human Health Risks of Trichloroethylene: Key Scientific Issues
(ISBN: 0309102839). (National Research Council)
(July 2006, 472 pages).
Complete report: http://www.nap.edu/catalog/11707.html#toc
Executive summary: http://newton.nap.edu/execsumm_pdf/11707

Considerations Regarding Application of Permanganate for Remedies in Tennessee.
(State Coalition For the Remediation of Drycleaners)
(June 2006, 11 pages)
http://www.drycleancoalition.org/download/tn_MnO4_injections_2006.pdf

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Cost & Performance Report: In Situ Remediation of a TCE-Contaminated Aquifer Using a Short Rotation Woody Crop Groundwater Treatment System
(ESTCP ER-9519)
(May 2006, 81 pages)
http://docs.serdp-estcp.org/viewfile.cfm?Doc=CU%5F9519%5FC%26P%2Epdf

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ETV Case Studies Volume II
September, 2006
http://www.epa.gov/etv/

Evaluating, Optimizing, or Ending Post-Closure Care at MSW Landfills Based on Site-Specific Data Evaluation
(ITRC ALT-4)
(September 2006, 164 Pages)
http://www.itrcweb.org/Documents/ALT-4.pdf

Final Report: Edible Oil Barriers for Treatment of Perchlorate-Contaminated Groundwater
(ESTCP ER-0221)
(February 2006, 196 pages)
http://docs.serdp-estcp.org/viewfile.cfm?Doc=ER%2D0221%2DFR%2D01%2Epdf

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Grant Guidelines To States For Implementing The Delivery Prohibition Provision Of The Energy Policy Act Of 2005
(EPA-510-R-06-003)
(August 2006, 11 pages)
http://www.epa.gov/oust/fedlaws/final_dp.htm

In-Situ Chemical Oxidation Engineering Issue Paper
http://www.epa.gov/ada/download/issue/600R06072.pdf

Measurement and Monitoring: 20th and 21st Quarterly Literature Searches.
(From U.S. EPA Office of Superfund Remediation and Technology Innovation)
(20th Quarterly: June 2006, 87 pages)
(21st Quarterly: October 2006, 135 pages)
http://clu-in.org/programs/21m2/

NATO/CCMS Pilot Study:
Prevention and Remediation Issues in Selected Industrial Sectors Athens, Greece June 4-7, 2006
http://clu-in.org/athens
http://www.nato.int/ccms

New Cost and Performance Information on Cleanup Technologies (FRTR)
http://www.frtr.gov/costperf.htm

Planning and Promoting Ecological Land Reuse of Remediated Sites
(ITRC ECO-2)
(July 2006, 154 pages)
http://www.itrcweb.org/Documents/ECO-2.pdf

Remediation Case Studies and Technology Assessment Reports Fact Sheet: June 2006
(EPA 542-F-06-004)
(June 2006, 6 pages)
http://www.cluin.org/download/frtr/2006frtrfactsheet.pdf

The Remediation Technologies Development Forum: Major Accomplishments: 1992-2006
(EPA 542-F-06-005)
(August 2006, 4 pages)
http://clu-in.org/download/rtdf/542f06005.pdf

Silt Curtains as a Dredging Project Management Practice

ERDC TN-DOER-E21

by N. R. Francingues and M. R. Palermo
(18 pages, 1.8 MB)
http://el.erdc.usace.army.mil/elpubs/pdf/doere21.pdf

Strategy for an EPA/Tribal Partnership to Implement Section 1529 of the Energy Policy Act of 2005
(EPA-510-R-06-005)
(August 2006, 154 pages)
http://www.epa.gov/oust/fedlaws/Tribal%20Strategy_080706r.pdf

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Survey of Munitions Response Technologies
(SERDP, ESTCP, ITRC)
(June 2006, 216 pages)
http://www.cluin.org/download/remed/Survey_of_Munitions_Response_Technologies.pdf

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Technology News and Trends
(EPA 542-N-06-004)
(July 2006, 8 pages)
http://www.cluin.org/download/newsltrs/tnandt0706.pdf

Technology News and Trends
(EPA 542-N-06-005)
(October 2006, 6 pages)
http://www.cluin.org/download/newsltrs/tnandt1006.pdf

Technology Reference Guide for Radiologically Contaminated Surfaces
(EPA-402-R-06-003)
(March 2006, 150 pages)
http://www.epa.gov/radiation/docs/cleanup/402-r-06-003.pdf

Serious Scientists Gather 'Round. . .

TI: Combined Sewer Overflows to Surface Waters Detected by the Anthropogenic Marker Caffeine
AU: Buerge, IJ; Poiger, T; Muller, MD; Buser, HR
JN: Environmental Science and Technology
PD: 2006
VO: 40
NO: 13
PG: 4096-4102
PB: ACS AMERICAN CHEMICAL SOCIETY
IS: 0013-936X
PE: JUL 01
URL: http://www.ingentaconnect.com/search/expand?unc=1063381321
Click on the URL to access the article or to link to other issues of the publication.

TI: Considering User Attitude in Early Development of Environmentally Friendly Technology: A Case Study of NoMix Toilets
AU: Lienert, J; Larsen, TA
JN: Environmental Science and Technology
PD: 2006
VO: 40
NO: 16
PG: 4838-4844
PB: ACS AMERICAN CHEMICAL SOCIETY
IS: 0013-936X
PE: AUG 15
URL: http://www.ingentaconnect.com/search/expand?unc=1063784319
Click on the URL to access the article or to link to other issues of the publication.

Disclaimer

This quarterly newsletter publication is meant to be used for information only. It does not represent the opinion of the management of the regional or national offices of EPA, only that of the author. The accuracy of the information contained herein is not guaranteed, only desired. If corrections are necessary, please contact the author. Thanks again to all of my information resources, which include EPA's OSRTI (formerly TIO), ORD (including ETV and NRMRL News) and Region 1's CEIT.

Thanks for reading it! Comments and suggestions are appreciated. If you wish to be added to or deleted from this list, please send me an email. (gill.michael@epa.gov)

Newsletter archives can be found on the EPA intranet site.....
http://www.epa.gov/osp/hstl/hstlnewsletter.htm

A number of environmental technology web resources can be found here.....http://www.epa.gov/region09/waste/techlinks/

And don't forget the HSTL website.....http://www.epa.gov/osp/hstl.htm

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